



1 KATOWICE

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# ARCTICUS BLANCUS ANTARCTIC ICE REMOVAL PROGRAM

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*ANTARCTIC FEES ESTIMATION*

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## ARCTICUS BLANCUS ANTARCTIC FEES

### 1. ARCTICUS BLANCUS TRIBAL OPERATIONS FEE.

1 OUNCE OF GOLD PER 100,000 M3.

1 ~PANAM MAX SHIP = 5 OUNCES OF GOLD.

1KM3 OF ICE = 10,000 OUNCES OF GOLD

1,100,000 KM3 OF ICE = 11,000,000,000 OUNCES OF GOLD

@ \$3500 PER OUNCE = ~ 38.5 TRILLION DOLLARS.

### 2. ANTARCTIC GEOMAGNETIC RESEARCH FEES.

EXPLOSIVES USE FEE 50% OF OPERATIONS FEE.

NON EXPLOSIVE OPERATIONS 25% OF OPERATIONS FEE.

### 3. URGENT CARE HEALTH CARE FACILITIES.

5-25 % OF TRIBAL OPERATIONS FEE PROVIDES ACCESS TO ANTARCTIC HEALTH CARE FACILITIES VIA AIR AND MARITIME TRANSPORT PAID BY THIS FEE.

### 4. INFRASTRUCTURE DECOMMISSION DEPOSITS.

EQUAL TO COST OF DECONSTRUCTION AND REMOVAL OF INSTALLED

INFRASTRUCTURE BASED ON RATES AND SUBJECT TO CHANGE PAID IN GOLD.

ALL PRICES SUBJECT TO CHANGE. ONLY FORM OF CURRENCY ACCEPTED ARE VALUABLE METALS SUCH AS: GOLD & SILVER, COPPER & IRON. UP TO 10% OF FEES CAN BE PAID IN INTERNATIONAL CURRENCY OF TRIBAL CHOISING WITH TRIBAL PERMISSION.



**ICE SHIPPING CALCULATION VIA ULTRA LARGE CARRIER**  
**(NO BARGE AND TUG BOAT)**

**FROM**

RONNE ICE SHELF IN ANTARCTICA

**TO**

ICE PROCESSING DOCKS OF SWAKOPMUND NAMIBIA

**DISTANCE**

4500 NAUTICAL MILES

**CARGO SIZE**

500,000 DWTM3

**FUEL TYPE**

LNG

**FUEL PRICE**

500 DOLLAR PER TON

**FUEL CONSUMPTION**

100 TONS PER DAY

**TRIP LENGTH**

20 DAYS OF FUEL

**FUEL REQUIRED**

2000 TONS PER TRIP

**TOTAL PRICE**

1,000,000 DOLLAR

**PRICE PER DWTM3**

2 DOLLARS PER M3 (1000 LITERS) OF WATER

1 CENT PER 5 LITERS OF WATER

0.02 CENT PER 1 LITER OF WATER

**CALCULATIONS BASED ON**

<https://www.shipuniverse.com/ship-fuel-cost-estimator/>

BARGING AND RAW ICE TUGBOAT TRANSPORTATION, IF POSSIBLE, MUCH CHEAPER.



## TOTAL ICE AREAS AND VOLUME TO REMOVE

68

69

### 70 ACCESS FROM AFRICA

71 100,000 KM2

72 1000 KM LONG X 100 KM2 WIDE

73 ICE THICKNESS

74 MINIMAL 1000M

75 MAXIMAL 5000M

76

### 77 ACCESS FROM AUSTRALIA

78 235,000 KM2

79 2300 KM LONG X 100 KM2 WIDE

80 ICE THICKNESS

81 MINIMAL 1000M

82 MAXIMAL 5000M

83

### 84 POLAR AREA ICE SIZE TO REMOVE (~ANTARCTIC DAM SIZE)

85 765,000 KM2

86 RADIUS 500 KM

87 DIAMETER 1000 KM

88

### 89 TOTAL PLANNED ICE AREA TO REMOVE

90 1,100,000 KM2

91

### 92 TOTAL MINIMAL ICE VOLUME BASED OF ICE HEIGHT

#### 93 POLAR AREA + ACCESS FROM AFRICA

94 865,000 KM3 FOR 1KM THICK ICE

95 1,730,000 KM3 FOR 2KM THICK ICE

96 2,595,000 FOR 3KM THICK ICE

97 3,460,000 FOR 4KM THICK ICE

98 4,325,000 FOR 5KM THICK ICE



## CARGO SHIPS CALCULATIONS

### CARGO SHIPS VOLUME USED FOR CALCULATION

ONE KM<sup>3</sup> OF ICE = 1KM<sup>3</sup> = 1,000,000,000 M<sup>3</sup>

ONE PANAMA CLASS CARGO SHIP = 500,000M<sup>3</sup> = 0.005 KM<sup>3</sup> OF ICE

200 PANAMA CLASS CARGO SHIPS = ONE KM<sup>3</sup> OF ICE = 1KM<sup>3</sup> OF ICE

### FOR 6/ MONTH ICE REMOVAL 100 YEAR PLAN TOTAL ICE TO REMOVE

865,000 KM<sup>3</sup> FOR 1KM THICK ICE = 173,000,000 PANAM MAX SHIPS LOAD

1,730,000 KM<sup>3</sup> FOR 2KM THICK ICE = 346,000,000 PANAM MAX SHIPS LOAD

2,595,000 FOR 3KM THICK ICE = 519,000,000 PANAM MAX SHIPS LOAD

3,460,000 FOR 4KM THICK ICE = 692,000,000 PANAM MAX SHIPS LOAD

4,325,000 FOR 5KM THICK ICE = 856,000,000 PANAM MAX SHIPS LOAD

### TOTAL ICE VOLUME / 100 YEARS/ 182 DAYS= NUMBER OF SHIPS PER DAY

FOR 1KM THICK ICE = 9,600 PANAM MAX SHIPS LOAD PER DAY

FOR 2KM THICK ICE = 19,200 PANAM MAX SHIPS LOAD PER DAY

FOR 3KM THICK ICE = 28,800 PANAM MAX SHIPS LOAD PER DAY

FOR 4KM THICK ICE = 38,400 PANAM MAX SHIPS LOAD PER DAY

FOR 5KM THICK ICE = 48,000 PANAM MAX SHIPS LOAD PER DAY

### ICE REAPING OPERATION MAXIMUM ABILITIES

AUSTRALIAN SIDE 100 KM WIDE WITH 1 ICE REAPER PER 1 KM OF 100KM WIDE LINE

AFRICAN SIDE 100 KM WIDE WITH 1 ICE REAPER PER 1 KM OF 100 KM WIDE LINE

TOTAL 200 ICE REAPERS THAT GIVES NUMER OF SHIPS PER DAY PER 1KM WIDE.

### TOTAL NO. OF SHIPS REQUIRED FOR 24 HOUR OPERATIONS PER 1KM WIDE AREA.

FOR 1KM THICK ICE = 48 SHIP LOADS PER DAY PER 1 KM WIDE ICE AREA

FOR 2KM THICK ICE = 96 SHIP LOADS PER DAY PER 1 KM WIDE ICE AREA

FOR 3KM THICK ICE = 144 SHIP LOADS PER DAY PER 1 KM WIDE ICE AREA

FOR 4KM THICK ICE = 192 SHIP LOADS PER DAY PER 1 KM WIDE ICE AREA

FOR 5KM THICK ICE = 240 SHIP LOADS PER DAY PER 1 KM WIDE ICE AREA



**TOTAL NUMER OF SHIPS REQUIRED WITH VARIABLE SHIP TURNAROUND TIME**  
NOT ENOUGH DATA TO COMPLETE CALCULATIONS

**MAGNETIC FLUX INCREASE PER KM3 ON 1KM OF POLAR ICE REMOVED**  
UNKNOWN, NEED POLAR UNDER ICE MAGNETIC FLUX STUDY  
AND MEGATOSPEHERE REFRACTION FORMULA BASED ON EM AND UV  
WAVE PENETRATION, REFLECTION, REFRACTION.

## CONCLUSIONS

- A. LARGER SHIPS ALTERNATIVES MUST BE EXPLORED.
- B. LONGER ICE REMOVAL TIME MIGHT BE REQUIRED EG 100-200 YEARS.
- C. SHIPS WOULD REQUIRE NUCLEAR PROPULSIONS.
- D. ALL ICE PROCESSING PORTS AND HALFWAY POINTS WOULD REQUIRE SPECIAL NUCLEAR MAINTENANCE AND NUCLEAR EMERGENCY DOCKS.
- E. ICE HARVESTING WOULD HAVE TO BE DONE ON 100 KM WIDE AREAS AND HAVE TENS OF HARVESTERS ALONG EACH 1 KM WIDE AREA ALL THE WAY TO POLAR REGION TO BE ABLE TO LOAD SHIPS WIHTOUT DELAY AS IT MIGHT TAKE SEVERAL HOURS TO FULL DAY TO LOAD A SINGLE PANAM MAX CLAS SHIP.
- F. AN ICE SHEET HAULING WITH RADIATION FREE NUCLEAR PROPULSION TUG BOATS ELIMINATING RADIATION BY MAGNETIC PARTICLE CONVERSION-REDOX REACTIONS, HAULING 1KM2 PIECES TO NAMIBIA AND AUSTRALIA COMPLETING ALL OPERATIONS IN FRACTION OF PLANED TIME.
- G. TESTS ON BASIC TUG BOAT PULLING AND ICE BEHAVIOUR TESTS SHOULD BE DONE ON ALL ROUTS ON 1KM2 PIECES OF VARIABLE ICE THICKNESS.



## TUG BOAT SHIPS CALCULATIONS

### TOTAL MINIMAL ICE VOLUME BASED OF ICE HEIGHT TO REMOVE

865,000 KM3	FOR 1KM THICK ICE
1,730,000 KM3	FOR 2KM THICK ICE
2,595,000	FOR 3KM THICK ICE
3,460,000	FOR 4KM THICK ICE
4,325,000	FOR 5KM THICK ICE

### NUMBER OF TUGBOAT REQUIRED BASED ON ICE BLOCK SIZE. CALCULATIONS MADE ON ICE THICKNESS OF 1KM OF ICE = 865,000 KM3. FOR HIGHER ICE THICKNESS MULTIPLY BY NUMBER OF KILOMETERS OF ICE THICKNESS.

2KM OF ICE	1,730,000 KM3 MULTIPLE BY 2X
3KM OF ICE	2,595,000 KM3 MULTIPLE BY 3X
4KM OF ICE	3,460,000 KM3 MULTIPLE BY 4X
5KM OF ICE	4,325,000 KM3 MULTIPLE BY 5X

0.050 KM X 0.250 KM X 0.250 KM = 0.003125 KM3 = 276,600,000 TUGBOAT TRIPS
0.050 KM X 0.250 KM X 0.500 KM = 0.006250 KM3 = 138,400,000 TUGBOAT TRIPS
0.050 KM X 0.500 KM X 0.500 KM = 0.012500 KM3 = 69,200,000 TUGBOAT TRIPS
0.050 KM X 0.500 KM X 0.750 KM = 0.018750 KM3 = 46,133,333 TUGBOAT TRIPS
0.050 KM X 0.500 KM X 1.000 KM = 0.025000 KM3 = 34,600,000 TUGBOAT TRIPS
0.050 KM X 0.750 KM X 1.000 KM = 0.037500 KM3 = 23,066,667 TUGBOAT TRIPS
0.050 KM X 1.000 KM X 1.000 KM = 0.050000 KM3 = 17,300,000 TUGBOAT TRIPS
0.050 KM X 1.000 KM X 1.250 KM = 0.062500 KM3 = 13,840,000 TUGBOAT TRIPS
0.050 KM X 1.000 KM X 1.500 KM = 0.075000 KM3 = 11,533,333 TUGBOAT TRIPS

0.075 KM X 0.250 KM X 0.250 KM = 0.0046875 KM3 = 184,533,333 TUGBOAT TRIPS
0.075 KM X 0.250 KM X 0.500 KM = 0.0093750 KM3 = 92,266,667 TUGBOAT TRIPS
0.075 KM X 0.500 KM X 0.500 KM = 0.0187500 KM3 = 46,133,333 TUGBOAT TRIPS
0.075 KM X 0.500 KM X 0.750 KM = 0.0281250 KM3 = 30,755,556 TUGBOAT TRIPS



192	$0.075 \text{ KM} \times 0.500 \text{ KM} \times 1.000 \text{ KM} = 0.0375000 \text{ KM}^3 = 23,066,667 \text{ TUGBOAT TRIPS}$
193	$0.075 \text{ KM} \times 0.750 \text{ KM} \times 1.000 \text{ KM} = 0.0562500 \text{ KM}^3 = 15,377,778 \text{ TUGBOAT TRIPS}$
194	$0.075 \text{ KM} \times 1.000 \text{ KM} \times 1.000 \text{ KM} = 0.0750000 \text{ KM}^3 = 11,533,333 \text{ TUGBOAT TRIPS}$
195	$0.075 \text{ KM} \times 1.000 \text{ KM} \times 1.250 \text{ KM} = 0.0937500 \text{ KM}^3 = 9,226,667 \text{ TUGBOAT TRIPS}$
196	$0.075 \text{ KM} \times 1.000 \text{ KM} \times 1.500 \text{ KM} = 0.1125000 \text{ KM}^3 = 7,688,889 \text{ TUGBOAT TRIPS}$
197	
198	$0.100 \text{ KM} \times 0.250 \text{ KM} \times 0.250 \text{ KM} = 0.00625 \text{ KM}^3 = 138,400,000 \text{ TUGBOAT TRIPS}$
199	$0.100 \text{ KM} \times 0.250 \text{ KM} \times 0.500 \text{ KM} = 0.01250 \text{ KM}^3 = 69,200,000 \text{ TUGBOAT TRIPS}$
200	$0.100 \text{ KM} \times 0.500 \text{ KM} \times 0.500 \text{ KM} = 0.02500 \text{ KM}^3 = 34,600,000 \text{ TUGBOAT TRIPS}$
201	$0.100 \text{ KM} \times 0.500 \text{ KM} \times 0.750 \text{ KM} = 0.03750 \text{ KM}^3 = 23,066,667 \text{ TUGBOAT TRIPS}$
202	$0.100 \text{ KM} \times 0.500 \text{ KM} \times 1.000 \text{ KM} = 0.05000 \text{ KM}^3 = 17,300,000 \text{ TUGBOAT TRIPS}$
203	$0.100 \text{ KM} \times 0.750 \text{ KM} \times 1.000 \text{ KM} = 0.07500 \text{ KM}^3 = 11,533,333 \text{ TUGBOAT TRIPS}$
204	$0.100 \text{ KM} \times 1.000 \text{ KM} \times 1.000 \text{ KM} = 0.10000 \text{ KM}^3 = 8,650,000 \text{ TUGBOAT TRIPS}$
205	$0.100 \text{ KM} \times 1.000 \text{ KM} \times 1.250 \text{ KM} = 0.12500 \text{ KM}^3 = 6,920,000 \text{ TUGBOAT TRIPS}$
206	$0.100 \text{ KM} \times 1.000 \text{ KM} \times 1.500 \text{ KM} = 0.15000 \text{ KM}^3 = 5,766,667 \text{ TUGBOAT TRIPS}$
207	
208	$0.125 \text{ KM} \times 0.250 \text{ KM} \times 0.250 \text{ KM} = 0.0078125 \text{ KM}^3 = 110,720,000 \text{ TUGBOAT TRIPS}$
209	$0.125 \text{ KM} \times 0.250 \text{ KM} \times 0.500 \text{ KM} = 0.0156250 \text{ KM}^3 = 55,360,000 \text{ TUGBOAT TRIPS}$
210	$0.125 \text{ KM} \times 0.500 \text{ KM} \times 0.500 \text{ KM} = 0.0312500 \text{ KM}^3 = 27,680,000 \text{ TUGBOAT TRIPS}$
211	$0.125 \text{ KM} \times 0.500 \text{ KM} \times 0.750 \text{ KM} = 0.0468750 \text{ KM}^3 = 18,453,333 \text{ TUGBOAT TRIPS}$
212	$0.125 \text{ KM} \times 0.500 \text{ KM} \times 1.000 \text{ KM} = 0.0600000 \text{ KM}^3 = 14,416,667 \text{ TUGBOAT TRIPS}$
213	$0.125 \text{ KM} \times 0.750 \text{ KM} \times 1.000 \text{ KM} = 0.0937500 \text{ KM}^3 = 9,226,667 \text{ TUGBOAT TRIPS}$
214	$0.125 \text{ KM} \times 1.000 \text{ KM} \times 1.000 \text{ KM} = 0.1250000 \text{ KM}^3 = 6,920,000 \text{ TUGBOAT TRIPS}$
215	$0.125 \text{ KM} \times 1.000 \text{ KM} \times 1.250 \text{ KM} = 0.1562500 \text{ KM}^3 = 5,536,000 \text{ TUGBOAT TRIPS}$
216	$0.125 \text{ KM} \times 1.000 \text{ KM} \times 1.500 \text{ KM} = 0.1875000 \text{ KM}^3 = 4,613,333 \text{ TUGBOAT TRIPS}$
217	
218	$0.150 \text{ KM} \times 0.250 \text{ KM} \times 0.250 \text{ KM} = 0.0093750 \text{ KM}^3 = 92,266,667 \text{ TUGBOAT TRIPS}$
219	$0.150 \text{ KM} \times 0.250 \text{ KM} \times 0.500 \text{ KM} = 0.0187500 \text{ KM}^3 = 46,133,333 \text{ TUGBOAT TRIPS}$
220	$0.150 \text{ KM} \times 0.500 \text{ KM} \times 0.500 \text{ KM} = 0.0375000 \text{ KM}^3 = 23,066,667 \text{ TUGBOAT TRIPS}$
221	$0.150 \text{ KM} \times 0.500 \text{ KM} \times 0.750 \text{ KM} = 0.0468750 \text{ KM}^3 = 18,453,333 \text{ TUGBOAT TRIPS}$
222	$0.150 \text{ KM} \times 0.500 \text{ KM} \times 1.000 \text{ KM} = 0.0750000 \text{ KM}^3 = 11,533,333 \text{ TUGBOAT TRIPS}$
223	$0.150 \text{ KM} \times 0.750 \text{ KM} \times 1.000 \text{ KM} = 0.1125000 \text{ KM}^3 = 7,688,889 \text{ TUGBOAT TRIPS}$
224	$0.150 \text{ KM} \times 1.000 \text{ KM} \times 1.000 \text{ KM} = 0.150000 \text{ KM}^3 = 5,766,667 \text{ TUGBOAT TRIPS}$





225 0.150 KM X 1.000 KM X 1.250 KM = 0.187500 KM<sup>3</sup> = 4,613,333 TUGBOAT TRIPS

226 0.150 KM X 1.000 KM X 1.500 KM = 0.225000 KM<sup>3</sup> = 3,844,444 TUGBOAT TRIPS

227

228 0.200 KM X 0.250 KM X 0.250 KM = 0.0125 KM<sup>3</sup> = 69,200,000 TUGBOAT TRIPS

229 0.200 KM X 0.250 KM X 0.500 KM = 0.0250 KM<sup>3</sup> = 34,600,000 TUGBOAT TRIPS

230 0.200 KM X 0.500 KM X 0.500 KM = 0.0500 KM<sup>3</sup> = 17,300,000 TUGBOAT TRIPS

231 0.200 KM X 0.500 KM X 0.750 KM = 0.0750 KM<sup>3</sup> = 11,533,333 TUGBOAT TRIPS

232 0.200 KM X 0.500 KM X 1.000 KM = 0.1000 KM<sup>3</sup> = 8,650,000 TUGBOAT TRIPS

233 0.200 KM X 0.750 KM X 1.000 KM = 0.1500 KM<sup>3</sup> = 5,766,667 TUGBOAT TRIPS

234 0.200 KM X 1.000 KM X 1.000 KM = 0.2000 KM<sup>3</sup> = 4,325,000 TUGBOAT TRIPS

235 0.200 KM X 1.000 KM X 1.250 KM = 0.2500 KM<sup>3</sup> = 3,460,000 TUGBOAT TRIPS

236 0.200 KM X 1.000 KM X 1.500 KM = 0.3000 KM<sup>3</sup> = 2,883,333 TUGBOAT TRIPS

237

238 **CONCLUCIONS**

239

240 A. TUG BOAT WITH A NUCLEAR POWER WILL BE BEST CHOICE TO TRANSPORT IN  
241 OPEN WATERS LARGE PIECES OF ANTARCTIC ICE.

242 B. USE OF SPECIAL TOWING TAPES, ROPES, MESHES WILL BE NEEDED TO KEEP ICE  
243 INTACT IN THE OCEAN WATERS.

244 C. STUDIES AND TESTS SHOULD BE CONDUCTED ON TOWING VARIOUS PIECES OF  
245 ICE WITHG PANAMA MAX CLASS VESSEL.

246 D. USE OF EXTRA LARGE AND POWERFULL TUG BOATS WILL ALLOW TO COMPLETE  
247 THE ICE TRANSPORT IN 100-200 YEARS BY WORKING 6 MONTHS PER YEAR WITH  
248 25,000 TO 50,000 TUG BOAT IN TOTAL.

249 E. REFERENCE OF PLANNED ARCTIC DAM SIZE NOT PART OF ANTARCTIC  
250 CALCULATION INNER RADIUS 850KM, OUTER RADIUS 900 KM, 875,000 KM<sup>2</sup>

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*Arctic Men Extinction Notice.*

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*Arctic Magnetic Earth Naturalist.*



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*Arctic Magnetic Electric Nuissance.*

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*Antarctic Mass Excavation Nonetheless.*